

## **Critical Thinking for Ordinary People and Professional Analysts**

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Educators are constantly urged to cultivate “critical thinking.” This would be difficult even if everyone agreed what “critical thinking” is. Which they don’t. Furthermore, many of the teaching aids available on-line or in print were written by philosophers (of logic usually) which makes them hard to understand. Logic has an honored place in critical thinking, but also a big weakness because two highly educated and very intelligent people can have opposite opinions on what is “logical.” Consider the firm opinions of Democrats and Republicans on many issues, for one example, or the evidence presented by ardent proponents of different religions for another.

This essay tries to simplify commentary on critical thinking to focus on a few themes that most would agree with. Those will be:

1. Sourcing all data, and searching for multiple, independent sources.
2. Evidence based reasoning contrasted with “authority” and “credibility.”
3. Editorial frames (or “bias”) among sources, and the value of editorial processes.
4. Propaganda, Marketing and Spin Doctoring.
5. Groupthink, Politicization and “Logic.”
6. Financial and other Conflicts of Interest among sources.
7. Statistics
8. Wisdom (ha, try defining that!) versus “facts” and “opinions.”

### **Sourcing all data, and Searching for Multiple, Independent Sources**

Journalists, cops and professional analysts at the CIA and other intelligence agencies agree that sourcing your data (or evidence) is critical. If you don’t know where an alleged “fact” came from, your ability to verify it is greatly diminished. Since all three groups deal with people who lie every day, they know that verifying alleged information is very important.

Unless you have a photographic memory and X-ray vision, verification can be very time consuming. But it is essential if accuracy is one of your primary goals, as it should be in good journalism, good police work, and good advice for senior executives like the President of the United States. We will provide more specific examples in sections to follow.

One bromide or rule of thumb from journalism deserves highlighting because it has been adopted by both good cops and good analysts. That is the habit of searching for independent sources to corroborate claims of fact, especially if the alleged “facts” have great consequence.

We stress here the importance of making both sourcing and searching habits of your thinking process, at least when trying to think analytically and “critically.” Going back through old facts accumulated over time to find out where they came from can be either a) impossible or b) tons of work. Professionals in all these fields can usually tell you where they got any significant piece of information. Very good ones can tell you paragraphs about each source, because where that data came from can have decisive effects on what that data really means.

## **Evidence based Reasoning contrasted with “Authority” and “Credibility”**

Another common theme among good journalists, cops and intelligence analysts is “evidence based reasoning.” This is commonly associated with the scientific method, because scientists have a lot of experience with that, and with measurement and experimentation as methods to improve it. But its roots go much further back, notably in law where the revolution was looking for “evidence” of guilt rather than just accusation by powerful lords or persecutors.

However, a very large fraction of perfectly normal people still use “authority” as their main way of evaluating information. By this we mean they do not ask “what’s the evidence” to support or refute some controversial datum or position, but rather they ask “what do people with authority say is true?” “Credibility” is a blend of both styles, so we will illustrate with a church example.

The Catholic Church has a very firm position on the morality of artificial birth control. Evidence based thinkers of any faith want to learn statistics about reliability, side effects, health outcomes, unintended consequences, effect on common goods and such. Authority based thinkers who are Catholic just ask what is the Pope’s or the Church’s position on this? “Credibility” can flow from either evidence or authority. Most Popes’ authority and credibility in biology is minimal, because they received degrees in philosophy and theology typically, and served for decades in an institution known for waiting centuries to accept scientific concepts. But the same Popes’ authority and credibility on Church doctrines, the catechism, or canon law is extremely high.

Professional intelligence analysts around the world are taught to use evidence based reasoning whenever they can, because this avoids stunning mistakes that can lead to wars and horrible consequences. However, they also work in bureaucracies that can fire (or in some countries kill) them if they oppose the dominant political power of the day. So some compromise with authority is often prudent for analysts who want long careers or life expectancies.

## **Editorial Frames (or “bias”) among sources, and the value of Editorial Processes**

“The Media” is a major way most people in the developed world, including cops and intelligence analysts get their information about the world. Unfortunately, “the media” is bought and paid for by someone, because it costs money to gather information and to process or distribute it whether the method is television, newspapers, radio, blogs or whatever. This introduces the possibility of biases among owners, authors, or among advertisers or sponsors who write checks to either.

Rather than use the pejorative term “bias” I prefer the term “editorial frames” and will illustrate them this way. By far the largest newspapers in New York City are the New York Times and the Wall Street Journal. Both are known worldwide because of their extensive editorial processes, armies of fact checkers (for verification of alleged data) and pretty good records of accuracy over time (no one on this earth is 100% accurate all of the time). That long and good track record for accuracy adds substantially to “credibility” for both of these papers, especially on alleged facts.

However, their views on what facts mean can be polar opposites, and often are when it comes to political issues. Even their opinions on the meanings of economic data can be quite different. One is owned by a megabillionaire with very well-known biases inclined toward financial and political power, while the other is owned by a wealthy family with strong journalistic traditions.

Those points noted, professional analysts are likely to read both papers if they have time because the papers' strict editorial processes mean that most of the facts alleged in either will be accurate. One can ignore conclusions of reporters and opinion page writers and still learn many good facts relevant to important questions. Over time, one learns to discount the editorial frames of known media. For another example, excellent research shows that television is the least accurate form of media for several reasons. This does not mean ignore TV, just watch it with great skepticism.

Intelligence agencies learned the power of media and especially TV long ago, so they are very skilled at planting stories there for propaganda, and cultivating friendly reporters and editors (friendly to them, not to innocent readers) who will accept bribes for influence. Therefore it is sadly true that non-American media outlets are often more accurate than American ones on selected issues. I recommend to you sources like the BBC World News, Deutsche Welle, Agence France-Presse, CBC (Canadian Broadcasting Company), Al Jazeera English and even RT (a Russian outlet) when international issues are at stake, which illustrates another theme.

RT is undoubtedly a propaganda outlet for the Russian government and Vladimir Putin at this time. "Press TV" is a propaganda outlet for the Iranian government. Haaretz and the Jerusalem Post in Israel could be described thus also, except that they reflect opposite views on Israeli politics, one more conservative, one more liberal. These all reflect differing "editorial frames" and what critics see as "propaganda" authors see as "truth," maybe even "wisdom." One virtue of enemy media is that they are often the first to tell you things your home government wants to hide. An accurate view of what is actually going on benefits from searching for multiple and independent sources on topics of exceptional importance, and knowing their editorial frames.

### **Propaganda, Marketing and Spin Doctoring**

One of the funny things about propaganda is that its roots run deep in marketing. Professional propagandists are often sent to get advanced degrees in marketing because they are so closely related. But most people think propaganda is terrible and that marketing is OK, or even essential to well run businesses. A kind of middle ground can be found in "Public Affairs" offices in major businesses. The Public Affairs offices of intelligence agencies are exceptions. They are hilarious to observe when they dance pretzels around objective truth trying to spin embarrassing news stories like the official use of torture despite national and international laws forbidding that.

"Spin doctors" are employed by every political campaign with money to hire them because any story can be cast in a more positive or more negative light. Much of the art involves creative use of adjectives and value words. One of the best examples of this was provided to me long ago by a Master Sergeant in the US Special Forces who, when asked how to tell the difference between terrorists and freedom fighters, said: "Terrorists are their guys, freedom fighters are our guys." May God Bless the Special Forces for clarity of language anyway! Spin doctors obfuscate. If you need to find a spin doctor, call a public relations firm.

### **Groupthink, Politicization and "Logic"**

Any group can develop "groupthink," but that and "politicization" are especially serious problems for official intelligence agencies and professional analysts. Therefore I will copy some

actual definitions here, then explain why they are critical for analysts and humans to understand. These two concepts are intimately related but not identical. Wikipedia defines Groupthink thus:

**Groupthink** is a psychological phenomenon that occurs within a group of people, in which the desire for harmony or conformity in the group results in an irrational or dysfunctional decision-making outcome. Group members try to minimize conflict and reach a consensus decision without critical evaluation of alternative viewpoints, by actively suppressing dissenting viewpoints, and by isolating themselves from outside influences.

In a speech to CIA analysts from then Director of Central Intelligence Bob Gates (findable at <https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/volume-36-number-1/pdf/v36i1a01p.pdf>) Gates said: “The problem of politicization is as old as the intelligence business. ... Almost all agree that it involves deliberately distorting analysis or judgments to favor a preferred line of thinking irrespective of evidence.”

Note these phrases above, in reverse order: “thinking irrespective of evidence,” “isolating themselves from outside influences,” and “actively suppressing dissenting viewpoints.” The first is the cardinal sin for analysts, the second two are built into the structures of intelligence agencies, especially security clearance and information classification systems that systematically weed out critics, actually fear ethics (a separate topic I have written extensively about, for them) and isolate themselves from outside influences in things called “SCIFs” (Secure, Compartmented Information Facilities). When the only people “cleared” to know secrets about topic X are sitting in a SCIF looking at each other, you only have two or three or at most a handful of people who might note flaming errors of fact, analysis, interpretation, assumptions or the sidebar that Joe (or Jane!) is an alcoholic with serious mental issues from sitting in SCIFs too often and too long.

I mean no unnecessary insult to the brave people who expose themselves to toxic spy tradecraft long enough to endure the mental illnesses that tradecraft induces in so many career officers. But polite society needs to know how toxic those secrecy practices are, and how seriously groupthink and politicization can destroy both objective analysis and national honor. For one example, the USA invaded a sovereign nation in 2003 (Iraq) that had not attacked us, did not have significant WMDs, and was an enemy of Al Qaeda, after telling the Congress, the country and the United Nations the opposite using highly politicized, and sometimes fraudulent information. The head of Britain’s MI6 (their CIA equivalent) told his Prime Minister and cabinet as early as July 23, 2002 that “the intelligence was being fixed around the policy.” That’s a very concise definition of “politicization.” The cost was over \$1 trillion, tens of thousands of US troops killed and wounded and about one million dead in an Iraq that will probably never reintegrate. Enter ISIS.

Now, a few words about “Logic.” Logic is extremely useful, but it is also treacherous because as noted earlier, very highly educated and intelligent people often disagree profoundly about what is “logical.” Still logic is a core of science and critical thinking. So I encourage everyone to read long lists of “logical fallacies” prepared by mostly philosophers like “*post hoc ergo propter hoc*” findable at <http://www.logicalfallacies.info/> and similar bromides of scientists like “correlation does not prove causation.” One example of the latter is that birds rise about the same time that many people wake up, but unless you live on a farm with a rooster, the rising birds do not cause the people to wake. Both are responding to a much bigger sun. A longer list of logical fallacies can be found on Wikipedia at: [https://en.wikipedia.org/wiki/List\\_of\\_fallacies](https://en.wikipedia.org/wiki/List_of_fallacies)

## Financial and other Conflicts of Interest among sources

It should be obvious but bears emphasis here that a lot of “research” presented as “credible facts” is pure junk commissioned by people with vested interests in the outcome (usually financial, but sometimes bureaucratic). Some research is junk because the scientists are incompetent, but much is just bought and paid for. It is sad, but true, that with thousands of unemployed Ph.D.’s running around, wealthy people or groups can easily find someone with “credentials” who will put their name on junk research, or testify on behalf of their sponsors. A Federal Judge once asked me how we evaluate statistics, because by the time cases reach the Federal Courts both sides often have gold plated Ph.D.’s presenting completely opposite statistics to them with total confidence. This problem goes far beyond commissioned research, or rent-an-experts. Everyone has some financial interests, and biases. These are reasons why all allegations of “fact” need to be verified.

A single example will do here. Scientists around the world started debating “global warming” in about 1982, after dramatic evidence was presented at international conferences. Soon thereafter, vested interests like some oil and coal companies started sponsoring “research” to prove this was not important. They also bought some “scientists” to write books, publish papers, and testify to governments that global warming was not even real, while actual measurements of temperatures were consistently rising. Put enough effort into that, and supplement it with massive campaign contributions by people like the infamous Koch brothers whose tens of billions came first from oil and energy, and as recently as 2014 almost all of one party’s Congressmen were on record doubting the reality of global warming and even the integrity of scientists who spoke about it.

While attending a security conference at our National Intelligence University in 2005, an intelligence officer told me personally that they had been forbidden to talk about global warming or to do any research on its military implications, even though a guru in the Pentagon had already commissioned a report on how serious those consequences might be in October 2003.\* Money talks and bullshit walks, even at some of our nation’s most elite trainers of intelligence officers.

\* “An Abrupt Climate Change Scenario and Implications for National Security” is findable at: [http://www.climate.org/PDF/clim\\_change\\_scenario.pdf](http://www.climate.org/PDF/clim_change_scenario.pdf)

## Statistics

Much alleged evidence is presented as statistics about this or that. For this reason statistics is the most useful branch of mathematics for most analysts. It is far more practical than calculus, trigonometry, or even algebra and geometry. AND, it’s much easier! You obviously cannot learn statistics from a little essay like this. But anyone could make time for a tiny, but classic book called “How to Lie with Statistics.” This is required reading for spin doctors, and shows by very clear and simple words how easy it is for experts to distort truth by creative use of statistics. You can’t avoid statistics, because they are everywhere, and some bite! But a good nose for falsehoods presented as “facts” by misleading statistics is essential for analysts anywhere.

On the positive side of this, if you master the use of statistics you may bamboozle your enemies.

And if you cannot refute the snake oil salesmen who paralyze critical thinking by numbing it with numbers, you will be vulnerable, and may even lose arguments about life and death issues.

## **Wisdom (ha, try defining that!) versus “Facts” and “Opinions”**

A wise man once said: “Everyone is entitled to their own opinions, but they are not entitled to their own facts.” He was a practical politician known for taking on tough issues, so he had lots of practice with the other kind who invent facts to suit their arguments of the day. That would be many of us, actually, according to current brain research and psychology. People almost always think that they (we) are more rational than research indicates. Since critical thinking aims to maximize rationality, and evidence based decisions, it has an uphill struggle from the beginning.

Many words have already been devoted here to differences between “facts” and “opinions” about what facts mean practically. You can ask any journalist about these distinctions because they are central to that profession. But wisdom; wisdom is far more ephemeral. In one nutshell, wisdom is in the eyes of the beholder, like art and beauty. But some eyes appear to be much more clear and discerning than others. The most primitive people can tell you who their wise ones are.

I have written some essays on this for intelligence professionals, and that has got me invitations to talk around the world. But not visible progress in practice or internal policies, partly because wisdom, like ethics, is discouraged among analysts who work for government bureaucracies. Someone upstairs generally forbids it, and more specifically, analysts are often trained to leave “wisdom” to the politicians and other policy makers. When I asked at a spy conference who was responsible for wisdom in their official reports, some wag answered “the politicians” which got the biggest laugh at the whole thing. This was followed by a deep sucking sound unique in my experience, as the whole room recognized simultaneously the grim implications of that truth.

So I will just say here that wisdom requires combining true ethics with the best facts available about human problems of serious consequence, because that’s when people care to consult “the wise,” whomever they are. It also requires deep understandings of human nature and of human systems for the same reason. Many would say that wisdom requires spirituality of some kind.

Whatever your conclusions about wisdom, I encourage you to distinguish it as qualitatively different from either facts or opinions. And I declare that accuracy is not the only purpose for critical thinking skills. Accuracy is just a stepping stone to something far more precious.

## **Conclusions**

Critical thinking is very difficult. So what? The nation is in danger and the children are in peril. Human civilization is groaning under a “Developing Global Crisis”\* and human survival itself may be at risk to the confluence of weapons of mass destruction with millions of unemployed and very poorly educated teenaged males. Demagogues of the worst kind are eager to exploit their anger and desperation, for money or power, by focusing that anger on their neighbors.

Critical thinking is essential to dealing with this and a hundred derivative problems, like global warming, resource depletion, desertification, poverty, ignorance, terrorism, organized crime and wars that proliferate in failed states. Sure critical thinking is hard; LIFE is hard! Deal with that. It is everyone’s responsibility to do what they can when the children are in danger, and critical thinking is a key to many solutions to the challenges of our time. Grow up and overcome them.

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\* A 32 minute video on “The Developing Global Crisis” is at: <https://www.youtube.com/watch?v=RLyMB3KGWck>